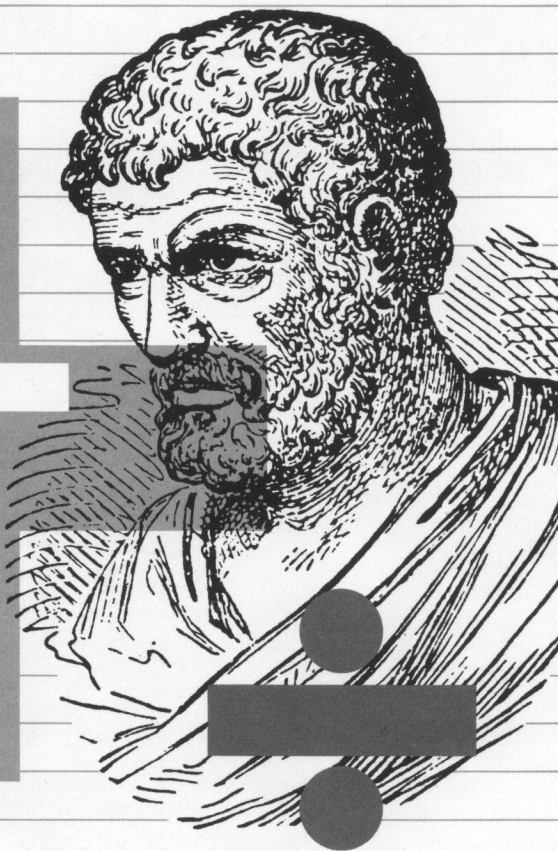


Math Facts and Games

$$\bullet + \bullet = \bullet \bullet$$



ATARI[®]
LEARNING SYSTEMS



Table of Contents

Introduction	2
Getting Started	3
The Count Down	7
Guess the Secret Word	8
Tic-Tac-Toe	9
The Great Computer Challenge	10

Introduction

The purpose of Math Facts and Games is to provide an enjoyable method for practicing math facts. It includes four games that you play against the computer. Before you can take your turn, however, you must correctly answer a math fact. Since most learners have difficulty with certain sets of facts, they need practice on particular facts rather than on all of them. Therefore, before you choose the game you're going to play, you choose the operation (+, -, $\times$, $\div$) or a combination of them. You also choose one of three difficulty levels, or a combination of all three. In this way, you can select the facts you need to practice, and then practice them while playing:

The Count Down

Guess the Secret Word

Tic-Tac-Toe

The Great Computer Challenge

You may choose from seven operations or combinations of operations:

1 Addition

2 Subtraction

3 Addition & Subtraction

4 Multiplication

5 Division

6 Multiplication & Division

7 Addition, Subtraction,
Multiplication & Division

When you choose a particular operation, the game you play will use facts related to this operation. If you select operation #3, for example, only addition and subtraction exercises will be used during the game.

Getting Started

Follow these steps to load the Math Facts and Games program into your ATARI® computer system:

1. With your computer turned off, turn on your television set or monitor and disk drive. Wait for the busy light on the disk drive to go out.
2. If your computer is *not* equipped with built-in ATARI BASIC, insert an ATARI BASIC cartridge in the cartridge slot (the left cartridge slot on the ATARI 800® computer).
3. Insert the Math Facts and Games diskette in your disk drive (disk drive 1, if you have more than one drive) and close the disk drive door or latch.
4. Turn on your computer. As your disk drive goes to work, you'll hear a beeping sound while the first part of the program loads into your computer. After several moments, a title screen will appear on your screen, followed by the first screen of instructions.

To begin learning with Math Facts and Games, type in your first name and press **RETURN**. Then simply follow the instructions that appear on the screen.

After selecting the operations you want to practice, you may choose facts from three different difficulty levels (or a combination of all three).

- 1 Less difficult facts
- 2 Medium difficult facts
- 3 Most difficult facts
- 4 Mixture of levels 1, 2 & 3

Getting Started

Addition

The three difficulty levels for addition are:

- Sums to 9 and less (55 facts).

$0+0=0$	$1+4=5$	$3+1=4$	$5+2=7$
$0+1=1$	$1+5=6$	$3+2=5$	$5+3=8$
$0+2=2$	$1+6=7$	$3+3=6$	$5+4=9$
$0+3=3$	$1+7=8$	$3+4=7$	$6+0=6$
$0+4=4$	$1+8=9$	$3+5=8$	$6+1=7$
$0+5=5$	$2+0=2$	$3+6=9$	$6+2=8$
$0+6=6$	$2+1=3$	$4+0=4$	$6+3=9$
$0+7=7$	$2+2=4$	$4+1=5$	$7+0=7$
$0+8=8$	$2+3=5$	$4+2=6$	$7+1=8$
$0+9=9$	$2+4=6$	$4+3=7$	$7+2=9$
$1+0=1$	$2+5=7$	$4+4=8$	$8+0=8$
$1+1=2$	$2+6=8$	$4+5=9$	$8+1=9$
$1+2=3$	$2+7=9$	$5+0=5$	$9+0=9$
$1+3=4$	$3+0=3$	$5+1=6$	

- Sums to 10 or doubles (13 facts).

$5+5=10$	$9+9=18$	$3+7=10$	$7+3=10$
$6+6=12$	$1+9=10$	$4+6=10$	$8+2=10$
$7+7=14$	$2+8=10$	$6+4=10$	$9+1=10$
$8+8=16$			

- The remaining 32 facts.

$2+9=11$	$5+8=13$	$6+5=11$	$8+7=15$
$3+8=11$	$5+9=14$	$7+4=11$	$9+2=11$
$3+9=12$	$6+7=13$	$7+5=12$	$9+3=12$
$4+7=11$	$6+8=14$	$7+6=13$	$9+4=13$
$4+8=12$	$6+9=15$	$8+3=11$	$9+5=14$
$4+9=13$	$7+8=15$	$8+4=12$	$9+6=15$
$5+6=11$	$7+9=16$	$8+5=13$	$9+7=16$
$5+7=12$	$8+9=17$	$8+6=14$	$9+8=17$

Getting Started

Subtraction

The three difficulty levels for subtraction correspond to the addition difficulty levels outlined on page 4.

Multiplication

The three difficulty levels for multiplication are:

- Multiples of 0, 1, 2 and selected 3s (56 facts).

$0 \times 0 = 0$	$1 \times 4 = 4$	$2 \times 8 = 16$	$5 \times 2 = 10$
$0 \times 1 = 0$	$1 \times 5 = 5$	$2 \times 9 = 18$	$5 \times 3 = 15$
$0 \times 2 = 0$	$1 \times 6 = 6$	$3 \times 0 = 0$	$6 \times 0 = 0$
$0 \times 3 = 0$	$1 \times 7 = 7$	$3 \times 1 = 3$	$6 \times 1 = 6$
$0 \times 4 = 0$	$1 \times 8 = 8$	$3 \times 2 = 6$	$6 \times 2 = 12$
$0 \times 5 = 0$	$1 \times 9 = 9$	$3 \times 3 = 9$	$7 \times 0 = 0$
$0 \times 6 = 0$	$2 \times 0 = 0$	$3 \times 4 = 12$	$7 \times 1 = 7$
$0 \times 7 = 0$	$2 \times 1 = 2$	$3 \times 5 = 15$	$7 \times 2 = 14$
$0 \times 8 = 0$	$2 \times 2 = 4$	$4 \times 0 = 0$	$8 \times 0 = 0$
$0 \times 9 = 0$	$2 \times 3 = 6$	$4 \times 1 = 4$	$8 \times 1 = 8$
$1 \times 0 = 0$	$2 \times 4 = 8$	$4 \times 2 = 8$	$8 \times 2 = 16$
$1 \times 1 = 1$	$2 \times 5 = 10$	$4 \times 3 = 12$	$9 \times 0 = 0$
$1 \times 2 = 2$	$2 \times 6 = 12$	$5 \times 0 = 0$	$9 \times 1 = 9$
$1 \times 3 = 3$	$2 \times 7 = 14$	$5 \times 1 = 5$	$9 \times 2 = 18$

Getting Started

The Four Games

After you select the mathematical operation and the difficulty level, you have the choice of playing one of the four games described on the following pages:

- The Count Down
- Guess the Secret Word
- Tic-Tac-Toe
- The Great Computer Challenge

The Count Down

Sample Run

You have thirty seconds to complete as many facts as you can. One point is added to your score for each fact you answer correctly. One point is subtracted for each incorrect answer, or if you take five seconds to answer (your score will never go below zero). The scoreboard clock ticks until it reaches zero. The clock ticks only while you have a new fact to answer. You may pause until you're ready for another fact. When the time flashes zero, you're finished and your final score is recorded.

COUNT DOWN	
ED	TIME
	30

6 + 9 =

COUNT DOWN	
ED	TIME
26	

GAME IS OVER!!!

26 IS A FABULOUS SCORE ED

Examples of Screen Output

Guess the Secret Word

Sample Run

The computer selects a secret math word and indicates the number of letters in the word. If your guess is not correct, you're given a math fact. If you answer the fact correctly, you're given another letter in the word. You continue to get additional letters until you guess the word correctly, or until all letters have been revealed. For each letter entered by the computer, your prize decreases \$10 (for example, after three letters are given, your prize will be \$70). If you guess the word before the entire word is displayed, you receive your prize.

```
GUESS THE SECRET WORD
AND WIN $100.
```

```
---E-
```

```
YOUR GUESS?
```

```
GUESS THE SECRET WORD
AND WIN $70.
```

```
MO-EY
```

```
YOUR GUESS?  MONEY
```

```
GREAT ED YOU GOT IT!!!
```

```
HERE'S YOUR $70.
```

```
$$$$$$$$ $$$$$$$$ $$$$$$$$ $$$$$$$$
$$$$$$$$ $$$$$$$$ $$$$$$$$ $$$$$$$$
$$$$$$$$ $$$$$$$$
```

Examples of Screen Output

Tic-Tac-Toe

Sample Run

You play against the computer. In order to make a play on the board, however, you must correctly answer a fact. If you answer incorrectly, or if you take too long, you lose your turn. After correctly answering a fact, you may choose a number on the board. The number is replaced by the first initial of your name. The computer shows its play with an "*" "The first player to line up three in a row (across, down, or diagonally) is the winner!

```
TIC-TAC-TOE

YOUR TURN ED.

TO EARN THE CHANCE TO PLAY
PLEASE DO THIS EXERCISE.

12 - 7 =      ↓
                2 | 7 | 6
                9 | 5 | 1
                4 | 3 | 8
```

```
TIC-TAC-TOE

                E | E | *
                E | * | *
                E | 3 | 8

THE WINNER IS ED
```

Examples of Screen Output

The Great Computer Challenge

Sample Run

You choose one of four speeds: slow, average, fast, or super fast. This choice determines how long you have to answer each fact. If you choose the "super fast" speed, you have approximately one second to answer. The "slow" speed allows approximately eight seconds. If you beat the computer, you score one point. If you answer incorrectly, or if you take too long, the computer scores a point. The first player to score ten points wins.

```
THE GREAT COMPUTER CHALLENGE
                                READY ---
                                GET SET ---
                                GO!

10 - 4 = 6
                                ↓
SCORE-----ED 1
                                ME 0
```

```
THE GREAT COMPUTER CHALLENGE

SCORE-----ED 3
                                ME 10
GAME IS OVER.  I WIN.
```

Examples of Screen Output

This program has been developed by Edward C. Beardslee of BERTAMAX INC. for instructional and self-improvement purposes.

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